

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2004/002316

A. CLASSIFICATION OF SUBJECT MATTER

Int.Cl' G01N27/12, G01N27/416, G01N27/04, G01M3/16, H01M10/48

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl' G01N27/00-27/49, G01M3/16, H01M10/48

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Jitsuyo Shinan Koho 1922-1996 Toroku Jitsuyo Shinan Koho 1994-2004

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Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

JICST FILE (JOIS)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	JP 2002-277435 A (Sony Corp.), 25 September, 2002 (25.09.02), Claims; Par. Nos. [0007] to [0008], [0013] to [0017] (Family: none)	1,2,7,11
X	JP 6-300724 A (Nippondenso Co., Ltd.), 28 October, 1994 (28.10.94), Claims; Par. Nos. [0018] to [0019], [0024]; Fig. 5	1,2,11
Y	Claims; Par. Nos. [0018] to [0019], [0024]; Fig. 5	7-10
A	Full text; all drawings (Family: none)	3-6

 Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

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"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

 later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art document member of the same patent family

Date of the actual completion of the international search

20 April, 2004 (20.04.04)

Date of mailing of the international search report

11 May, 2004 (11.05.04)

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PCT/JP2004/002316

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	JP 6-160319 A (Hughes Aircraft Co.), 07 June, 1994 (07.06.94), Claims; Par. Nos. [0021] to [0027]; Figs. 1 to 8	1,2,11
Y	Claims; Par. Nos. [0021] to [0027]; Figs. 1 to 8	7-10
A	Full text; all drawings & DE 69326726 D & EP 584557 A1 & US 5331287 A1 & DE 6932726 T	3-6
Y	JP 2001-296201 A (Tokin Corp.), 26 October, 2001 (26.10.01), Full text; all drawings (Family: none)	7,10
Y	JP 60-66145 A (Omron Tateisi Electronics Co.), 16 April, 1985 (16.04.85), Fig. 1 & US 4649364 A1	8,9
E,X	JP 2004-93246 A (Origin Electric Co., Ltd., NTT Facilities, Inc.), 25 March, 2004 (25.03.04), Full text; all drawings (Family: none)	1-11